REMARKS

Claims 1-17 are pending in this application.

The Office Action rejects claims 1-14 and 16-17 under 35 U.S.C. § 103(a) as being obvious over Kashima et al. (U.S. Patent No. 5,442,523), in view of EP 0724181 (EP '181). Claim 15 is similarly rejected under 35 U.S.C. §103(a) as being obvious over Kashima et al., in view of EP '181 and further in view of Keyer et al. (U.S. Patent No. 4,988,550). These rejections are traversed.

The technical problem of the present invention is: to have available sheets or panels for luminous signs or displays, lit with one or more lamps placed sideways with respect to the sign or display, able to show an intense and homogeneous lighting as much as possible.

The solution found in the invention to said technical problem is a thermoplastic composite of:

- a base thermoplastic layer;
- a diffusing layer placed on one or both sides of the base layer, constituted by a thermoplastic material containing barium sulphate in an amount by weight, expressed as % ratio on the total weight of the diffusing layer, of 0.01-2%, the barium sulphate having average particle sizes in the range 0,1-15 micron, the composite sides being at least ≥ 10 cm, the composite area being greater than 100 cm^2.

Non-obviousness of the present invention is demonstrated in the following experiments:

- Table 8 on page 20 and Table 1 on page 13 are relevant to light diffusion experiments wherein two composites were used, respectively.

  Said composites obtained by coupling by compression molding a light conducting plate with a diffusing thermoplastic plate. In Table 8, the diffusing plate contained 0.3% titanium dioxide, whereas in the other experiment (Table 1), the light diffusing thermoplastic plate contained 0.5% barium sulphate.

  The results obtained show that the lighting was more homogeneous on the surface of the composite comprising the diffusing thermoplastic plate containing 0.5% barium sulphate.

  Therefore, the experiment demonstrates that barium sulphate particles are more advantageous to be used in thermoplastic sheets than titanium oxide particles in order to obtain a more uniform light distribution on the surface of the composite.

- In the attached Declaration dated July 28, 2004, of Dr. Stasi, one of the inventors of the present Application it is described a light diffusion experiment using a composite panel formed of a diffusing plate of thermoplastic PMMA layer containing 10% of barium sulphate and a light conducting PMMA layer.

  Light intensity determinations were made on the surface of the panel at varying distances from the light source.

  Light intensity distribution on the surface of the diffusing layer was found to be quite uneven. It decreased very quickly at short distances from the light

source. At a distance of 15 cm from the light source, light intensity was found lower than 20% the value measured near the light source.

This shows that the range of barium sulphate in the thermoplastic diffusive layer set out in claim 1 of the invention is critical in order to solve the technical problem of the present invention, that is of obtaining, as said, on the surface of the composite an intense and homogeneous lighting as much as possible.

Applicants have already discussed in great detail in the past responses the teachings of Kashima et al. Therefore, Applicants comment herein below the statements in the Office Action on Kashima et al. that are incorrect.

- (the Office Action, page 2, last line to page 3, line 2) "The reference discloses single lamp edge lighting, dual lamp edge lighting... comprising barium sulfate... which can be added (emphasis added) to the conducting layer with light diffusing areas";

  (the Office Action, page 3, bottom lines) "The base sheet of Kashima is capable of containing particles of substances diffusing light, both of polymeric and inorganic type"

With reference to the second above cited quote, Applicants remark that nowhere in Kashima et al. is there disclosed or suggested particles of substance of diffusing light of polymeric type.

With reference to both the above statements, it should be considered that in col. 3, lines 4-6, Kashima et al. states:

"to impart light diffusing ability to the light conducting plate one may apply a light diffusing material to part of the plate surface" (emphasis added).

Therefore, Kashima et al. specifically discloses that a light diffusing material is applied to part of the light conducting plate surface.

Applicants remark that to apply means: "to lay or spread on", as from the enclosed page 97 from Webster's Ninth New Collegiate Dictionary.

Therefore, contrarily to the above statements, in Kashima et al., no diffusing inorganic particles are added to, or contained, in the base sheet. The diffusing material is, in fact, applied, as said, on part of the light conducting plate surface.

- (the Office Action, page 3, lines 8-9) "Fig. 3(a) shows a light transmissive sheet (7) and a light diffusing plate (3) attached to the sheet."

Applicants note that in Kashima et al., col. 3, lines 65-66, plate 3 is defined as "specular or light diffusing/reflecting plate 3".

Said plate 3 is a distinct component from the light diffusing material 6 (ref. col. 3, line 6) of the composite of Kashima et al.: in fact, the specular plate 3 has nothing to do with the light diffusing material 6.

Further, from Kashima et al., it is clearly drawn that plate 3, differently from the light diffusing material 6, is not critical for the solution of the technical problem of Kashima et al., i.e., to improve the efficiency of power to luminance conversion (ref. col. 1, lines 39-42).

In the past responses, Applicants have already mentioned composite example 7, col. 12, lines 24-31, wherein the coverage with the light diffusing material 6 was held constant to 100% producing a very uneven luminance distribution.

It should be noted that the composite of said example contains also the light diffusing/reflecting plate 3.

In fact, said composite is the same as defined in preceding col. 11, lines 50-64 of Kashima et al., but for the coverage that therein was 6% (col. 11, line 54) instead of 100% of the composite example 7 (col. 12, line 27).

In the composite of col. 11 is, in fact, includes a light diffusing/reflecting plate, as from col. 11, line 65.

Therefore, Applicants respectfully submit that the light diffusing/reflecting plate 3 of Kashima et al. mentioned in the above reported assertions, is not critical for the solution of the technical problem of the Kashima et al., since composite example 7 shows it is uninfluential for the solution of the technical problem of Kashima et al.

Applicants remark again that the technical problem of Kashima et al. has been solved by applying a partial coverage of the light diffusing material 6 on the light conducting plate.

Applicants briefly resume again herein below the reasons why Kashima et al. is not relevant prior art:

- Kashima et al. does not suggest a light diffusing thermoplastic layer containing inorganic particles.
- Kashima et al. does not suggest that in said light diffusing thermoplastic layer particles of barium sulphate would allow to obtain a more uniform and homogeneous light distribution than the titanium oxide particles (used in the examples of Kashima et al.).

- Kashima et al. does not suggest any amount of barium sulphate, as noted in the Office Action (ref. page 4 of the Office Action).

Therefore, on the basis of said reference, the skilled would not have known that by using a composite wherein the diffusing layer contained 10% of barium sulfate, as it was made in the Declaration, light distribution resulted uneven.

The technical problem of EP '181 was to obtain a light reflective sheet having an excellent light reflectance. See page 3, line 37, of EP '181.

With reference to the Office Action, Applicants wish herein to comment the following statements, in the Office Action concerning EP '181.

- (the Office Action, page 4, lines 7-10): "EP '181 teaches a composite panel with a light reflective sheet...with a light diffusing sheet (page 4, line 17) having an average particle size of the inorganic filler of 0.1 to 7 μm and is in the range of 100 to 300 parts by weight, wherein the inorganic filler is barium sulfate (page 6, lines 20-31)..."

Applicants remark again that the Office Action is misinterpreting EP '181.

In fact, from page 6, lines 19-21, of EP '181, it is drawn that the inorganic filler having the above referred to average particle size is contained in the porous sheet, identified with n. 21 in the list of the components of the composite panel of EP '181 (ref. page 4, line 21, of EP '181).

Said porous sheet is not the same as the light diffusive sheet of EP '181. In fact, the diffusive sheet in the above mentioned list is identified with n. 5, as from page 4, line 17, of EP '181, addressed by the Office Action.

The fact that inorganic particles are contained in the porous sheet and not in the diffusive sheet is also clearly shown by the following herein above reported statement from page 6, lines 19-20, of EP '181.

> "Furthermore, the particle size of the finely powdery inorganic filler has an influence on the surface state of the obtained porous sheet (emphasis added)..."

Therefore, the Office Action, as noted above, is confusing the light diffusive sheet 5 of page 4, line 17, with the porous resin sheet 21 of page 4, line 10, containing the particles of barium sulfate.

Applicants further remark that the porous resin sheet of EP '181 gives high light reflection, i.e., a reflectance of 95% or more at a wavelength of 550 nm. See page 4, line 29, of EP '181.

The light diffusing sheet of EP '181 does not contain any inorganic particle. In order to clear this issue, Applicants report herein below the relevant quote from page 11, lines 14-15 of EP '181:

> "As the light diffusion sheet 5, a polyethylene terephthalate sheet or a polyethylene terephthalate film whose surface is embossed can often be used."

Further, Fig. 1 of EP '181 shows that the porous resin sheet 21 is located behind the light source and therefore it must reflect light.

The position of the porous sheet 21 has nothing to share with that of the light diffusing sheet 5.

Therefore, inorganic particles of the porous sheet cannot be put in the light diffusion sheet of EP '181, since in EP '181 said two components are distinct each from the other.

- (the Office Action, page 4, lines 7-10) "It would have been obvious to include the thickness of the light diffusing layer, the amount by weight and average particle size of barium sulphate in the composite panel of Kashima et al."

In order to fill the gap of the missing barium sulphate quantities on the light diffusing material of Kashima et al., the Office Action combines the quantities of barium sulphate included in the porous resin sheet 21 of EP '181, that as shown above is a reflective sheet, in the light diffusing material of Kashima et al.

Therefore, following the argument in the Office Action, the skilled in order to solve the technical problem of the present invention, i.e., to obtain an intense and homogeneous lighting as much as possible, would have used an amount of barium sulfate that in the porous resin sheet of EP '181 gives high light reflection.

This seems to be contrary to common sense. It is not clear in which way by using an amount of barium sulphate that in EP '181 is taught to provide reflection of light, the skilled could arrive at the solution found in the present invention, wherein it is used a diffusing sheet, i.e., a sheet that instead diffuses light, so that on its surface an intense and homogeneous improved lighting is found.

Further, in the Office Action, at page 4, bottom lines for the obviousness rejection, the Office Action further states the following:

- "One of ordinary skill would understand how to adjust the amounts and particle size of barium sulphate based on the amount of light desired to be diffused."

Applicants remark that from EP '181, the skilled would have been taught on how a barium sulfate containing sheet for reflecting light is made and therefore would have drawn the quantities of barium sulfate that are needed to achieve said effect.

Therefore, the quantities of barium sulphate in the case of the porous sheet of EP '181 are very far from that used in the present invention, as shown by the following calculations.

On page 6, lines 31-33, of EP '181, it is stated that with respect to 100 parts by weight of the polyolefin resin the amount of barium sulfate is from 180 to 300 parts.

The calculated % wt of barium sulfate on the overall weight of the porous resin sheet + barium sulfate would therefore vary from 64% (180/280) to 75% (300/400).

Said limits are much higher than those of present claim 1, that range from 0.01 to 2% wt.

It is not clear on the basis of what prior art teachings the skilled, considering the quantities of barium sulphate disclosed in EP '181, would have been able to adjust the amounts of particle size of barium sulphate based on the amount of light desired to be diffused.

It should be considered that the Declaration shows that with a quantity of 10% barium sulphate, the technical problem of the present invention is still far from being solved.

There is no pointer in EP '181 that would have helped the skilled to adjust the amount of barium sulfate based on the amount of light desired to be diffused, or directed him to the solution of the technical problem of the present invention.

It is therefore concluded that claim 1 would not have been obvious in view of the cited prior art.

Therefore, also the rejection of dependent claim 15 under 35 U.S.C. § 103(a), of paragraphs 4 and 5 on page 5 of the Office Action is considered devoid of grounds.

Applicants have also considered section 6 of the Office Action "Response to Arguments" and wish to comment herein below the following statements therein made in the Office Action.

- (the Office Action, page 6, lines 3-4) "Applicant argues that there is no diffusing material made of inorganic particles."

Applicants remark that the Office Action is misinterpreting the Applicants' statement made on page 7, lines 10-11, of the Response of March 31, 2004.

> "...in Kashima there is no layer (emphasis added) of diffusing material made of inorganic particles."

Therefore, the Office Action did not correctly report the Applicants' statement.

At lines 9-10 of page 6, the Office Action further states "that the features upon which Applicant relies (i.e., completely covering the conducting plate with diffusing material) are not recited in the rejected claim(s)."

In claim 1 of the present invention, it is recited the feature that distinguishes it from the prior art: the diffusing layer made of a thermoplastic material containing the stated amount of barium sulphate.

In the art, it is well known what is meant by a thermoplastic layer of a composite panel. Therefore, the features upon which the Applicant relies are recited in pending claim 1.

- (the Office Action, page 6, lines 16-19) "Applicant argues Kashima does not disclose the light diffusing material forming a layer. By applying the light diffusing material on the light conducting plate, a light diffusing layer is formed".

It should be noted that for the working of the composite of Kashima et al. the light diffusing material 6 must be applied in the form of dots or strips to part of the surface of the light conducting plate. Nowhere in Kashima is it stated that the light diffusing material as therein applied forms a layer.

Therefore, the statement, in the Office Action is an unsupported personal interpretation of the prior art.

- (the Office Action, the paragraph bridging pages 6-7): "[t]he technical problem of the claimed invention is an intended use".

Applicants do not understand this statement. The technical problem of the present invention was to find sheets or panels for luminous signs or displays, lit with one or more lamps sideways placed with respect to the sign or display, able to show an intense and homogeneous lighting as much as possible.

Therefore, the technical problem was directed to find out a product. According to Applicants, claim 1 reads as a product claim.

- (the Office Action, page 7, lines 8-11) "Applicant further points to Table 1 of the instant application to overcome Kashima. This example does not

overcome the rejection of Kashima et al. in view of EP '181. Applicant has not shown that the Kashima et al. reference film cannot show the claimed features".

This issue has been herein above already dealt with. Applicants have shown that the skilled cannot combine EP '181 with Kashima et al.

Applicants have already pointed out that when the light diffusing material 6 of Kashima et al. gives a full coverage, the composite of Kashima et al. is inoperative. Therefore, it cannot be the same and does not suggest the thermoplastic light diffusing layer of the present invention.

Therefore, the skilled understand from Kashima et al. that a film of light diffusing material 6 should be avoided for the solution of the technical problem of Kashima et al.

- (the Office Action, page 7, lines 11-13) "[t]he comparison using titanium oxide lacks relevance because Kashima meets the claimed limitation of a light diffusing layer comprising barium sulphate."

Applicants remark again that Kashima et al. does not suggest a light diffusing thermoplastic layer containing inorganic particles, nor point to barium sulphate. Applicants have demonstrated that a light diffusing layer containing barium sulphate in the amounts stated in claim 1 affords to achieve a more intense and homogeneous lighting on the composite surface than using a light diffusing layer containing titanium oxide.

Neither Kashima et al. nor the combination of Kashima et al. with EP '181 suggest anything similar.

- (the Office Action, page 7, lines 15-17): "Applicant argues EP '181 has nothing to do with the present invention. EP '181 teaches a composite having a light diffusing sheet (abstract and page 4, line 17)".

Applicants agree with the Examiner that EP '181 teaches a composite panel having a diffusing sheet. However, Applicants note that at page 4, line 17, above cited by the Office Action, it is indicated the light diffusing sheet 5.

The light diffusing plate 5 of the composite of EP '181 does not contain any filler whatsoever, as shown above.

Therefore, by combining the light diffusing sheet of EP '181 pointed out by the Examiner, with the composite of Kashima et al., it is still left unsolved the problem on how the skilled could arrive at the solution found in the present invention, since none of said references teaches the quantity of barium sulphate to be used to obtain an intense and homogeneous lighting as much as possible.

- (the Office Action, page 7, lines 17-18) "Applicant argues that EP '181 does not contain any inorganic filler"

Applicants remark that in the past responses, Applicants never made a statement like this or one similar.

On page 7, lines 6-8 of the Request for Reconsideration After Final Rejection filed on September 16, 2003, the Applicants stated the following:

> "Therefore the light diffusing sheet, as it is defined in EP 0724181, i.e. <u>the light diffusing sheet 5</u> (emphasis added), contrarily to the assertion in the Office Action, does not contain any inorganic filler."

This is a very different matter than that referred to in the statement in the Office Action. Therefore, the Office Action misinterpreted once more the Applicants' comments.

For obviousness, the prior art must indicate clearly the problem to be solved and the solution.

The combination asserted in the Office Action is untenable, since the prior art combination fails to suggest a light diffusing thermoplastic sheet containing the amount of barium sulphate of present claim 1.

For obviousness, there must have been some motivation in the cited prior art wherein it is indicated how to solve the above technical problem, i.e., how to obtain improved light intensity and light homogeneity of the diffused light on the surface of the composite. The Office Action does not provide any passage in the prior art that would motivate the skilled to find the solution of the present invention.

For at least the above reasons, reconsideration and withdrawal of the rejection of claims 1-14 and 16-17 and of claim 15 under 35 U.S.C. § 103(a) are respectfully requested.

Applicant believes that the claims are in condition for allowance with the above amendments to the claims. Applicant thus respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance of the claims are earnestly solicited. Should the Examiner believe anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. The Commissioner is authorized to charge payment for any additional fees which may be required with respect to this paper or credit any overpayment to Counsel's Deposit Account 01-2300, making reference to Attorney Docket No. 108907-09021.

Respectfully submitted,

Robert K. Carpenter
Registration No. 34,794

Customer No. 004372
ARENT FOX PLLC
1050 Connecticut Avenue, N.W.,
Suite 400
Washington, D.C. 20036-5339
Tel: (202) 857-6000
Fax: (202) 638-4810

RKC/tdd

Attachments: Declaration of Alberto Luca Stasi
Dictionary excerpt

TECH/256074.1

Attorney Docket No. 108907-09021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	
Alberto Luca Stasi et al.	)	Art Unit: 1774
Serial No. 08/487,287	)	Examiner:
Filed: January 19, 2000	)	FERGUSON, LAWRENCE D.
For: Light diffusing composites	)	
	)	

DECLARATION OF DR. A. L. STASI

PURSUANT TO 37 C.F.R. § 1.132

Hon. Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

I, A. L. Stasi, do hereby declare that:

1. I am a citizen of Italy, residing in via Balzarotti 12/g, Rho 20017 MILANO - ITALY.

2. That in 1990 I got the degree in Physics at the University of Milan;

3. That since 1991 I have been working in the field of polymers;

4. I have read and I am familiar with the text of the Application and with the opposed prior art.

5. Under my supervision, direction and control, the following experiment was run:

- Preparation of a composite panel having a thermoplastic diffusing layer containing 10% barium sulphate in the form of particles

The panel base layer was a transparent PMMA sheet with a thickness of about 8 mm and 270 x 270 mm sizes. The sheet was obtained by an Altuglas® 200 10000 sheet having a 8 mm thickness, produced by Atoglas.

The diffusing layer was a PMMA film containing barium sulphate particles: a PMMA film having a 450 ± 50 μm thickness was obtained by extruding on a conventional monoscrew extruder equipped with degassing, with standard thermal profile for PMMA, a blend constituted for 90.0% of Altuglas® BS 9EL beads, produced by Atoglas and for 10 % of Blanc Fixe® K3 powder (containing 99% barium sulphate) produced by Sachtleben Chemie, having an average particle size of 8 μm.

In order to make the composite panel, the above described sheet and film were coupled by compression molding by using a 60 ton Potvel compression press; the coupling temperature was of about 150°C, with a maximum total plasticization and compression cycle of about 30 minutes. The cooling cycle was of about 5-10 minutes. The sheet extraction temperature was of about 70°C.

- Light intensity determinations on the surface of the panel

The light system used was light system A described in example 1, page 11 of the Application.

After lighting the panel for the test, at the visual inspection it was noticed on the surface of the composite light intensity was quite uneven and it decreased very quickly departing from the light source.

Light intensity was therefore determined near the light source, at a distance of 15 cm from the lamp external metallic structure, using the same procedure described in ex. 2a, page 12

of the Appln., taking the intensity of light determined at 3 cm from the light source to be 100%.

Values of li light intensity lower than 20% were found.

6. I also declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willfull false statements may jeopardize the validity of the application or any patent or registration issuing thereon.

Alberto Luca Stasi

Date: July 28 2005

FEATHER] (14c) 1 : any of the instinctive desires necessary to keep up organic life; *esp* : the desire to eat 2 a : an inherent craving ⟨an insatiable ~ for work⟩ b : TASTE, PREFERENCE ⟨the cultural ~s of the time —J. D. Hart⟩ — **ap·pe·ti·tive** \-ˌtī-iv\ *adj*

ap·pe·tiz·er \'ap-ə-ˌtī-zər\ *n* (1862) : a food or drink that stimulates the appetite and is usu. served before a meal

ap·pe·tiz·ing \-ˌtī-ziŋ\ *adj* (1633) : appealing to the appetite esp. in appearance or aroma *syn* see PALATABLE — **ap·pe·tiz·ing·ly** \-ziŋ-lē\ *adv*

ap·plaud \ə-'plȯd\ *vb* [ME *applauden*, fr. MF or L; MF *applaudir*, fr. L *applaudere*, fr. *ad-* + *plaudere* to applaud] *vi* (15c) : to express approval esp. by clapping the hands ~ *vt* 1 : to express approval of : PRAISE ⟨~ her efforts to lose weight⟩ 2 : to show approval of esp. by clapping the hands — **ap·plaud·able** \-ə-bəl\ *adj* — **ap·plaud·ably** \-blē\ *adv* — **ap·plaud·er** *n*

ap·plause \ə-'plȯz\ *n* [ML *applausus*, fr. L, clashing noise, fr. *applausus*, pp. of *applaudere*] (15c) 1 : marked commendation : ACCLAIM ⟨the kind of ~ every really creative writer wants—Robert Tallant⟩ 2 : approval publicly expressed (as by clapping the hands)

ap·ple \'ap-əl\ *n, often attrib* [ME *appel*, fr. OE *æppel*; akin to OHG *apful* apple] (bef. 12c) 1 : the fleshy usu. rounded and red or yellow edible pome fruit of a tree (genus *Malus*) of the rose family; *also* : an apple tree 2 : a fruit or other vegetable production suggestive of an apple — compare OAK APPLE — apple of one's eye : one that is highly cherished ⟨his daughter is the *apple of his eye*⟩

ap·ple·cart \-ˌkärt\ *n* (1788) : a plan, system, situation, or undertaking that may be disrupted or terminated ⟨upset the legislative ~ with a long filibuster⟩

ap·ple·jack \-ˌjak\ *n* (1816) : brandy distilled from hard cider; *also* : an alcoholic beverage traditionally made by freezing hard cider

ap·ple-knock·er \-ˌnäk-ər\ *n* (1919) : RUSTIC

apple maggot *n* (1867) : a two-winged fly (*Rhagoletis pomonella*) whose larva burrows in and feeds esp. on apples

ap·ple-pie \ˌap-əl-ˌpī\ *adj* (1780) 1 : EXCELLENT, PERFECT ⟨~ order⟩ 2 : of, relating to, or characterized by traditionally American values (as honesty or simplicity) ⟨is the epitome of ~ wholesomeness⟩

ap·ple-pol·ish \'ap-əl-ˌpäl-ish\ *vb* [fr. the traditional practice of schoolchildren bringing a shiny apple as a gift to their teacher] *vi* (1935) : to attempt to ingratiate oneself : TOADY ~ *vt* : to curry favor with (as by flattery) — **ap·ple-pol·ish·er** *n*

ap·ple·sauce \-ˌsȯs\ *n* (1739) 1 : a relish or dessert made of apples stewed to a pulp and sweetened 2 *slang* : BUNKUM, NONSENSE

apple scab *n* (ca. 1899) : a disease of apple trees caused by a fungus (*Venturia inaequalis*) producing dark blotches or lesions on the leaves, fruit, and sometimes the young twigs

ap·pli·ance \ə-'plī-ən(t)s\ *n* (1561) 1 : an act of applying 2 a : a piece of equipment for adapting a tool or machine to a special purpose : ATTACHMENT b : an instrument or device designed for a particular use; *specif* : a household or office device (as a stove, fan, or refrigerator) operated by gas or electric current 3 *obs* : COMPLIANCE *syn* see IMPLEMENT

ap·pli·ca·ble \'ap-li-kə-bəl *also* ə-'plik-ə-\ *adj* (1660) : capable of or suitable for being applied : APPROPRIATE ⟨statutes ~ to the case⟩ *syn* see RELEVANT — **ap·pli·ca·bil·i·ty** \ˌap-li-kə-'bil-ət-ē *also* ə-ˌplik-ə-\ *n*

ap·pli·cant \'ap-li-kənt\ *n* (15c) : one who applies (a job ~)

ap·pli·ca·tion \ˌap-lə-'kā-shən\ *n* [ME *applicacioun*, fr. L *application-*, *applicatio* inclination, fr. *applicatus*, pp. of *applicare*] (15c) 1 : an act of applying: a (1) : an act of putting to use ⟨~ of new techniques⟩ (2) : a use to which something is put ⟨new ~s for old remedies⟩ b : an act of administering or superposing ⟨~ of paint to a house⟩ c : assiduous attention ⟨succeeds by ~ to his studies⟩ 2 a : REQUEST, PETITION ⟨an ~ for financial aid⟩ b : a form used in making a request 3 : the practical inference to be derived from a discourse (as a moral tale) 4 : a medicated or protective layer or material ⟨an oily ~ for dry skin⟩ 5 : capacity for practical use ⟨words of varied ~⟩

ap·pli·ca·tive \'ap-lə-ˌkāt-iv, ə-'plik-ət-\ *adj* (1638) 1 : APPLICABLE, PRACTICAL 2 : put to use : APPLIED — **ap·pli·ca·tive·ly** *adv*

ap·pli·ca·tor \'ap-lə-ˌkāt-ər\ *n* (1659) : one that applies; *specif* : a device for applying a substance (as medicine or polish)

ap·pli·ca·to·ry \'ap-li-kə-ˌtōr-ē, -ˌtȯr-, ə-'plik-ə-\ *adj* (1649) : capable of being applied

ap·plied \ə-'plīd\ *adj* (1656) : put to practical use; *esp* : applying general principles to solve definite problems ⟨~ sciences⟩

¹ap·pli·qué \ˌap-lə-'kā\ *n* [F, pp. of *appliquer* to put on, fr. L *applicare*] (1801) : a cutout decoration fastened to a larger piece of material

²appliqué *vt* -quéd; -qué·ing (1881) : to apply (as a decoration or ornament) to a larger surface : OVERLAY

ap·ply \ə-'plī\ *vb* **ap·plied; ap·ply·ing** [ME *applien*, fr. MF *aplier*, fr. L *applicare*, fr. *ad-* + *plicare* to fold — more at PLY] *vt* (14c) 1 a : to put to use esp. for some practical purpose ⟨*applies* pressure to get what he wants⟩ b : to bring into action ⟨~ the brakes⟩ c : to lay or spread on ⟨~ varnish to a table⟩ d : to put into operation or effect ⟨~ a law⟩ 2 : to employ diligently or with close attention ⟨should ~ himself to his work⟩ ~ *vi* 1 : to have relevance or a valid connection ⟨this rule *applies* to freshmen only⟩ 2 : to make an appeal or request esp. in the form of a written application ⟨~ for a job⟩ — **ap·pli·er** \-'plī(-ə)r\ *n*

ap·pog·gia·tu·ra \ə-ˌpäj-ə-'tůr-ə\ *n* [It, lit., support] (ca. 1753) : an embellishing note or tone preceding an essential melodic note or tone and usu. written as a note of smaller size

ap·point \ə-'pȯint\ *vb* [ME *appointen*, fr. MF *apointier* to arrange, fr. *a-* (fr. L *ad-*) + *point* point] *vt* (14c) 1 a : to fix or set officially ⟨~ a trial date⟩ b : to name officially ⟨will ~ him director of the program⟩ c *archaic* : ARRANGE d : to determine the disposition of (an estate) to someone by virtue of a power of appointment 2 : to provide with complete and usu. appropriate or elegant furnishings or equipment ~ *vi* : to exercise a power of appointment *syn* see FURNISH

ap·point·ee \ə-ˌpȯin-'tē, ˌa-\ *n* (1768) 1 : one who is appointed 2 : one to whom an estate is appointed

ap·point·ive \ə-'pȯint-iv\ *adj* (1881) : of, relating to, or filled by appointment ⟨an ~ office⟩

ap·point·ment \ə-'pȯint-mənt\ *n* (15c) 1 a : an act of appointing : DESIGNATION b : the designation by virtue of a vested power of a person to enjoy an estate 2 : a nonelective office or position ⟨holds an academic ~⟩ 3 : an arrangement for a meeting : ENGAGEMENT 4 : EQUIPMENT, FURNISHINGS — usu. used in pl.

ap·por·tion \ə-'pȯr-shən, -'pōr-\ *vt* -tioned; -tion·ing \-sh(ə-)niŋ\ [MF *apportionner*, fr. *a-* (fr. L *ad-*) + *portionner* to portion] (1574) : to divide and share out according to a plan; *esp* : to make a proportionate division or distribution of

ap·por·tion·ment \-shən-mənt\ *n* (1628) : an act or result of apportioning; *esp* : the apportioning of representatives or taxes among the states according to U.S. law

ap·pose \ə-'pōz\ *vt* **ap·posed; ap·pos·ing** [ME² *aposer*, fr. OF, fr. *a-* + *poser* to put — more at POSE] (1593) 1 *archaic* : to put before : apply (one thing) to another 2 : to place in juxtaposition or proximity

ap·po·site \'ap-ə-zət\ *adj* [L *appositus*, fr. pp. of *apponere* to place near, fr. *ad-* + *ponere* to put — more at POSITION] (1621) : highly pertinent or appropriate : APT *syn* see RELEVANT — **ap·po·site·ly** *adv* — **ap·po·site·ness** *n*

ap·po·si·tion \ˌap-ə-'zish-ən\ *n* (15c) 1 a : a grammatical construction in which two usu. adjacent nouns having the same referent stand in the same syntactical relation to the rest of a sentence (as *the poet* and *Burns* in "a biography of the poet Burns") b : the relation of one of such a pair of nouns or noun equivalents to the other 2 a : an act or instance of apposing; *specif* : the deposition of successive layers upon those already present (as in cell walls) b : the state of being apposed — **ap·po·si·tion·al** \-'zish-nəl, -ən-ᵊl\ *adj*

ap·pos·i·tive \ə-'päz-ət-iv, a-\ *adj* (1693) : of, relating to, or standing in grammatical apposition — **appositive** *n* — **ap·pos·i·tive·ly** *adv*

ap·prais·al \ə-'prā-zəl\ *n* (1817) : an act or instance of appraising; *esp* : a valuation of property by the estimate of an authorized person

ap·praise \ə-'prāz\ *vt* **ap·praised; ap·prais·ing** [ME *appreisen*, fr. MF *aprisier* to apprize] (14c) 1 : to set a value on : estimate the amount of 2 : to evaluate the worth, significance, or status of; *esp* : to give an expert judgment of the value or merit of *syn* see ESTIMATE — **ap·praise·ment** \-'prāz-mənt\ *n* — **ap·prais·er** *n* — **ap·prais·ing** *adj* — **ap·prais·ing·ly** \-'prā-ziŋ-lē\ *adv*

ap·pre·cia·ble \ə-'prē-shə-bəl, -'prish(-ē)-ə-bəl\ *adj* (1818) : capable of being perceived or measured *syn* see PERCEPTIBLE — **ap·pre·cia·bly** \-blē\ *adv*

ap·pre·ci·ate \ə-'prē-shē-ˌāt, -'prish-ē- *also* 'prē-sē-\ *vb* **-at·ed; -at·ing** [LL *appretiatus*, pp. of *appretiare*, fr. L *ad-* + *pretium* price — more at PRICE] *vt* (1655) 1 a : to grasp the nature, worth, quality, or significance of ⟨can't ~ the difference between right and wrong⟩ b : to value or admire highly ⟨thinks no one ~s his endeavors⟩ c : to judge with heightened perception or understanding ; be fully aware of ⟨must experience it to ~ it⟩ d : to recognize with gratitude ⟨certainly ~s your kindness⟩ 2 : to increase the value of ~ *vi* : to increase in number or value — **ap·pre·ci·a·tor** \-ˌāt-ər\ *n* — **ap·pre·cia·to·ry** \-'prē-shə-ˌtōr-ē, -'prish-ə-, -ˌtȯr-\ *adj*

syn APPRECIATE, VALUE, PRIZE, TREASURE, CHERISH mean to hold in high estimation. APPRECIATE often connotes sufficient understanding to enjoy or admire a thing's excellence; VALUE implies rating a thing highly for its intrinsic worth; PRIZE implies taking a deep pride in something one possesses; TREASURE emphasizes jealously safeguarding something considered precious; CHERISH implies a special love and care for something. *syn* see in addition UNDERSTAND

ap·pre·ci·a·tion \ə-ˌprē-shē-'ā-shən, -ˌprish-ē- *also* -ˌprē-sē-\ *n* (1604) 1 a : JUDGMENT, EVALUATION; *esp* : a favorable critical estimate b : sensitive awareness; *esp* : recognition of aesthetic values c : an expression of admiration, approval, or gratitude 2 : increase in value

ap·pre·cia·tive \ə-'prē-shət-iv, -'prish-ət- *also* -'prē-shē-ˌāt-\ *adj* (1698) : having or showing appreciation — **ap·pre·cia·tive·ly** *adv* — **ap·pre·cia·tive·ness** *n*

ap·pre·hend \ˌap-ri-'hend\ *vb* [ME *apprehenden*, fr. L *apprehendere*, lit., to seize, fr. *ad-* + *prehendere* to seize — more at PREHENSILE] *vt* (1513) 1 : ARREST, SEIZE ⟨~ a thief⟩ 2 a : to become aware of : PERCEIVE b : to anticipate esp. with anxiety, dread, or fear 3 : to grasp with the understanding : recognize the meaning of ~ *vi* : UNDERSTAND, GRASP *syn* see FORESEE

ap·pre·hen·si·ble \ˌap-ri-'hen(t)-sə-bəl\ *adj* (15c) : capable of being apprehended — **ap·pre·hen·si·bly** \-blē\ *adv*

ap·pre·hen·sion \ˌap-ri-'hen-chən\ *n* [ME, fr. LL *apprehension-*, *apprehensio*, fr. L *apprehensus*, pp. of *apprehendere*] (14c) 1 a : the act or power of perceiving or comprehending ⟨a man of dull ~⟩ b : the result of apprehending mentally : CONCEPTION ⟨according to popular ~⟩ 2 : seizure by legal process : ARREST 3 : suspicion or fear esp. of future evil : FOREBODING

ap·pre·hen·sive \-'hen(t)-siv\ *adj* (14c) 1 : capable of apprehending or quick to do so : DISCERNING 2 : having apprehension : COGNIZANT 3 : viewing the future with anxiety or alarm *syn* see FEARFUL — **ap·pre·hen·sive·ly** *adv* — **ap·pre·hen·sive·ness** *n*

¹ap·pren·tice \ə-'prent-əs\ *n* [ME *aprentis*, fr. MF, fr. OF, fr. *aprendre* to learn, fr. L *apprendere, apprehendere*] (14c) 1 a : one bound by indenture to serve another for a prescribed period with a view to learning an art or trade b : one who is learning by practical experience under skilled workers a trade, art, or calling 2 : an inexperienced person : NOVICE ⟨an ~ in cooking⟩ — **ap·pren·tice·ship** \-ə(sh)-ˌship, -əs-ˌship\ *n*

²apprentice *vb* -ticed; -tic·ing *vt* (1631) : to set at work as an apprentice; *esp* : to bind to an apprenticeship by contract or indenture ~ *vi* : to serve as an apprentice

ap·pressed \ə-'prest\ *adj* [L *appressus*, pp. of *apprimere* to press to, fr. *ad-* + *premere* to press — more at PRESS] (1791) : pressed close to or lying flat against something ⟨leaves ~ against the stem⟩

ap·pres·so·ri·um \ˌa-pres-'ōr-ē-əm, -'ȯr-\ *n, pl* **-ria** \-ē-ə\ [NL, fr. L *appressus* + *-orium*] (1897) : the flattened thickened tip of a hyphal branch by which some parasitic fungi are attached to their host

ap·prise \ə-'prīz\ *vt* **ap·prised; ap·pris·ing** [F *appris*, pp. of *apprendre* to learn, teach, fr. OF *aprendre*] (1694) : to give notice to : TELL *syn* see INFORM